WHAT IS CLAIMED IS:

1. A method of ablating cardiac tissue, comprising the steps of:

providing an ablating device having an ablating element and a suction well, the suction well surrounding the ablating element, the suction well being coupled to a suction line which is coupled to a vacuum source;

positioning the ablating device against the patient's epicardium;

adhering the ablating device to the epicardium with the suction well; and

ablating tissue with the ablating element after the adhering step.

2. The method of claim 1, wherein:

the ablating step is carried out to form a transmural lesion without penetrating the epicardium.

3. The method of claim 1, wherein:

the providing step is carried out with the device having means for determining when the suction well is adequately adhered to the epicardium.

4. The method of claim 1, wherein:

the providing step is carried out with the device having a temperature sensor positioned to measure the temperature of the tissue during the ablating step.

5. The method of claim 4, wherein:

the providing step is carried out with the temperature sensor being positioned between adjacent ablating elements.

6. The method of claim 1, wherein:

the providing step is carried out with the suction well having an inner lip and an outer lip, the inner lip forming a closed wall around the ablating element, the device also having a fluid inlet and a fluid outlet for passing fluid into and out of a fluid chamber defined between the inner lip, the ablating element and the tissue.

7. The method of claim 6, further comprising the step of:

delivering a conductive fluid to the fluid inlet.

8. The method of claim 7, wherein:

the delivering step is carried out with the conductive fluid being hypertonic saline.

9. The method of claim 6, further comprising the step of:

delivering the fluid at a temperature of no more than 40°C.

10. The method of claim 9, wherein:

the delivering step is carried out with an average flow rate of fluid across each of a plurality of the ablating elements of at least 0.25 cc/sec.

11. The method of claim 10, wherein:

the delivering step is carried out with the average flow rate of fluid across each of the plurality of ablating elements is at least 0.50 cc/sec.

12. The method of claim 1, wherein:

the providing step is carried out with the ablating element having a width of 0.2-0.5 inch and a length of 5-12 inches.

13. The method of claim 1, wherein:

the positioning step is carried out with the ablating element being positioned 0.5-3 mm from the tissue.

14. The method of claim 1, wherein:

the providing step is carried out with the device having a plurality of cells, each cell having a suction well and at least one ablating element.

15. The method of claim 14, wherein:

the providing step is carried out with the device having 5-30 cells.

16. The method of claim 15, wherein: the providing step is carried out with the device having 10-25 cells.

17. The method of claim 14, wherein: the providing step is carried out with the device having means for determining whether each of the cells is adequately adhered to the tissue.

18. The method of claim 1, wherein: the providing step is carried out with the device having a locking mechanism; the method further comprising the steps of wrapping the device around the pulmonary veins and forming a closed loop by locking one part of the device to another part of the device with the locking mechanism.

19. A device for ablating tissue comprising: a body having a plurality of cells, at least one suction well for adhering the cells to tissue to be ablated; and at least one ablating element contained within the suction well.

20. The device of claim 19, wherein: the body has a plurality of suction wells and a suction lumen coupled to the plurality of suction wells.

21. The device of claim 19, wherein: the body has 10-25 cells.

22. The device of claim 19, further comprising: a fluid inlet positioned to deliver fluid within the suction well; and a fluid outlet which receives fluid from the fluid inlet.

23. The device of claim 22, wherein: the ablating element has a long axis and a short axis; and the fluid inlet and fluid outlet are positioned on opposite sides of the ablating element along the short axis.

24. The device of claim 13, wherein:
the fluid inlet is coupled to a source of conductive fluid.

25. The device of claim 9, wherein:
the ablating element is an RF electrode.

26. The device of claim 18, wherein:
the RF electrode has a length of 2-25 mm and a width of 1-6 mm.

27. A device for ablating cardiac tissue, comprising:
a body;
an ablating element coupled to the body;
a sensor positioned to measure a parameter at tissue ablated by the ablating element; and
a control system coupled to the sensor and the ablating element, the control system receiving parameter measurements from the sensor, the control system being operably coupled to the ablating element and delivering energy to the ablating element in response to the parameter measurements to create a lesion in the tissue.

28. The device of claim 27, wherein:
the sensor is a temperature sensor; and
the control system receives temperature change measurements over a period of time.

29. The device of claim 28, wherein:
the control system delivers energy to the ablating element until the temperature sensor measures a temperature below a threshold temperature.

30. The device of claim 28, wherein:
the control system delivers energy to the ablating element for a selected period of time while maintaining the temperature of a near surface of the tissue between 0-80°C.

31. The device of claim 28, further comprising:

a plurality of ablating elements; and

a plurality of temperature sensors, wherein at least two temperature sensors correspond to each ablating element; and

the control system receives the temperature change measurements from the at least two temperature sensors for each ablating element.

32. The device of claim 31, wherein:

each of the plurality of temperature sensors corresponds to one of the ablating elements; and

the control system delivers energy to at least one of the ablating elements for which the corresponding temperature sensor measures a lowest temperature.

33. The device of claim 27, wherein:

the body has a locking mechanism for locking one part of the body to another part of the body to form a closed loop.

34. A method of delivering energy to ablate tissue, comprising the steps of:

providing a device having an ablating element;

positioning the device at a tissue site, the tissue site having a near surface and a far surface;

measuring a temperature change at the tissue site over a period of time;

analyzing the temperature change to provide a tissue characterization; and

ablating the tissue in response to the tissue characterization.

35. The method of claim 34, wherein:

the analyzing and ablating steps are controlled by a control system;

the positioning step is carried out with the tissue site having a near surface and a far surface; and

the ablating step being carried out by maintaining the near surface temperature at a temperature of 0-80°C during the ablating step.

36. The method of claim 34, wherein:

the providing step is carried out with the device having an ablating element; and

the method also including the step of changing the temperature of the tissue with the ablating element; and

the ablating step is carried out with the ablating element.

37. The method of claim 34, wherein:

the positioning step is carried out with the device being in contact with the epicardium.

38. The method of claim 34, wherein:

the ablating step is carried out using the results of the measuring step to approximate when the far surface achieves a target temperature.

39. The method of claim 34, wherein:

the ablating step is carried out with input of at least one variable from a list of variables consisting of presence of fat, amount of fat, flow rate of blood, tissue thickness and temperature of blood.

40. The method of claim 34, wherein:

the ablating step is carried out with a plurality of ablating elements, wherein no more than 50% of the ablating elements are activated at one time.

41. The method of claim 34, wherein:

the providing step is carried out with the device having a plurality of suction wells, at least one of the ablating elements being positioned in each of the suction wells.

42. A device for ablating tissue, comprising:

an elongate body having an end, the elongate body having at least one ablating element; and

a plurality of suction wells in the body, the suction wells being positioned along the length of the body.

43. The device of claim 42, wherein:
the elongate body has a plurality of ablating elements.

44. The device of claim 43, wherein:
the suction wells are coupled to a suction lumen.

45. The device of claim 47, further comprising:
a second suction lumen coupled to another plurality of suction wells.

46. The device of claim 46, wherein:
the suction lumen is formed by a tube attached to the body.

47. The device of claim 42, wherein:
the suction well surrounds the ablating element.

48. The device of claim 44, wherein:
the suction well is formed by an inner lip and an outer lip;
the device further comprising a fluid inlet and a fluid outlet, the fluid inlet and outlet being configured to pass a fluid into and out of a space bounded by the inner lip.

49. The device of claim 46, wherein:
the fluid outlet is coupled to a suction lumen which is also coupled to at least one of the suction wells.

50. A method of creating a continuous ablation lesion in heart tissue, comprising the steps of:
providing a first ablating section and a second ablating section, the first and second ablating sections each having an end and an ablating element;
positioning the first and second ablating sections in contact with the epicardium;

wrapping the first and second ablating sections around at least one vessel;

interlocking the first and second sections to form a closed loop around the at least one vessel.

51. A method of creating a continuous lesion in tissue, comprising the steps of:

providing an ablating device having an ablating element;

positioning the ablating device in contact with the epicardium;

ablating tissue to create a first lesion;

moving the ablating device to a location adjacent the first lesion;

ablating tissue with the ablating element to create a second lesion which is continuous with the first lesion.

52. A method of creating a lesion from an epicardial location, comprising the steps of:

providing a first device and a second device slidably coupled to the first device, at least one of the first and second devices having an ablating element;

introducing the first and second devices into the pericardial space;

ablating tissue to form a first lesion with the ablating element;

moving at least one of the first and second devices relative to the other; and

forming a second lesion after the moving step.

53. A method of ablating cardiac tissue, comprising the steps of:

providing an ablating device having an ablating element and a suction well, the suction well being coupled to a suction line which is coupled to a vacuum source, the ablating device also having means for determining when the suction well is adhered to the epicardium;

positioning the ablating device against the patient's epicardium;

adhering the ablating device to the epicardium with the suction well; and

ablating tissue with the ablating element after the adhering step.

54. The method of claim 53, wherein:

the providing step is carried out with the determining means being a sensor selected from the group of sensors consisting of a flow rate sensor, a pressure sensor and an electric circuit.

55. A device for ablating epicardial tissue, comprising:

a body;

an ablating element mounted to the body;

a suction well on the body for adhering the body to the epicardium; and means for determining when the suction well is adhered to the epicardium;

56. The method of claim 55, wherein:

the determining means is a sensor selected from the group of sensors consisting of a flow rate sensor, a pressure sensor and an electric circuit.

57. A method of ablating cardiac tissue, comprising:

providing an ablating device having an ablating element, a fluid inlet, and a fluid outlet;

positioning the ablating element in contact with a patient's epicardium;

flowing fluid through the fluid inlet and fluid outlet to cool tissue laterally spaced from the ablating element; and

ablating tissue with the ablating element.

58. The method of claim 57, wherein:

the providing step is carried out with the ablating device having a vacuum lumen, the fluid outlet being coupled to the fluid outlet; and

the method further comprising the step of withdrawing fluid through the fluid outlet with the vacuum lumen.

59. The method of claim 57, wherein:

the providing step is carried out with the fluid also flowing along a backside of the ablating element.

60. The method of claim 57, wherein:

the providing step is carried out with the ablating device having at least one suction well; and

the method further including the step of adhering the ablating device to the epicardium with the suction well.

61. The method of claim 61, wherein:

the flowing step is carried out with the fluid cooling an area on the epicardium adjacent to the ablating element.

62. A device for ablating tissue, comprising:

a body having a plurality of cells, each cell having an ablating element; and

a number of hinges positioned between the cells.

63. The device of claim 62, wherein:

the body is formed of a material and the hinges are formed by integrally formed portions of the material.

64. The device of claim 62, wherein:

the body has at least 5-30 cells.

65. The device of claim 62, wherein:

the body has at least one suction well and a suction lumen coupled to the suction well.

66. The device of claim 65, wherein:

the body has 5-30 suction wells, a number of the suction wells being coupled to the suction lumen.

67. The device of claim 66, wherein:

the body has two suction lumens extending around the device, the plurality of suction wells being coupled to at least one of the two suction lumens.

68. The device of claim 66, wherein:

the body has a fluid inlet and a fluid outlet, the fluid inlet and fluid outlet.

69. The device of claim 68, wherein:

each of the cells has a fluid inlet and a fluid outlet.

70. The device of claim 68, wherein:

the fluid inlet and fluid outlet are positioned to deliver fluid across a backside of the ablating element.

71. The device of claim 68, wherein:

the fluid inlet and fluid outlet are positioned to deliver fluid across a frontside of the ablating element and in contact with the tissue being ablated.

72. The device of claim 62, further comprising:

a fluid conduit which receives a coolant, the fluid conduit directing the fluid to a position on the tissue adjacent to the ablating element.

73. The device of claim 72, wherein:

the fluid conduit directs the fluid to at least two lateral sides of the ablating element.

74. The device of claim 62, wherein:

the body is made of an elastomeric material.